



October 7, 2022

Re: *Request for Information on Climate-Related Financial Risk*

To Whom It May Concern:

On behalf of the Center for American Progress, we write to comment on the Commodity Future Trading Commission's (CFTC) request for information titled *Request for Information on Climate-Related Financial Risk* (RFI).<sup>1</sup> The Center for American Progress is an independent, nonpartisan policy institute that is dedicated to improving the lives of all Americans through bold, progressive ideas, as well as strong leadership and concerted action. Our aim is not just to change the conversation, but to change the country.

We greatly appreciate the opportunity to comment on this document. The derivatives markets play an important role in the financial system as they allow market participants to hedge against risks and plan for the future. Derivatives will undoubtedly play a large role in helping companies adapt to a carbon-neutral or carbon-negative economy and a warming climate, as these transitions have the potential to be jarring. Private sector enterprises face not only the consequences of harsher and more frequent fires, droughts, floods, and other physical disasters, but also potential disruptions from other companies along supply chains that fail to prepare effectively for a transition from fossil fuels to cleaner alternatives. Because derivatives markets can help private companies hedge their risk exposures—including risks from energy price swings—firms can use them to hedge potential losses from the physical risks of climate change and smooth the path to net zero.

However, climate change also affects the entities that enable derivatives markets to operate. In issuing the RFI, the CFTC appropriately notes that “[c]limate-related financial risk may directly or indirectly impact Commission registered entities, registrants, and other market participants as well as the derivatives markets and the underlying commodities markets themselves.”<sup>2</sup> These entities all face climate-related risks in the forms of operational risk (i.e., the risk that climate-exacerbated natural disasters will affect operations), and all market participants and derivative clearing organizations (DCOs) face counterparty risk (i.e., the risk that clearing members or counterparties cannot post margin as a result of climate-related financial risks).

We encourage the CFTC to expeditiously address climate-related financial risk within the derivatives markets. In addition to the above comments, below are answers to questions the RFI poses.

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<sup>1</sup> Commodity Futures Trading Commission, “Request for Information on Climate-Related Financial Risk,” *Federal Register* 87 (110) (2022): 34856-34862, available at <https://www.govinfo.gov/content/pkg/FR-2022-06-08/pdf/2022-12302.pdf>.

<sup>2</sup> *Id.* at 34857.

*2. Would it help the Commission, registered entities, registrants, market participants and/or the public to understand and/or to manage climate-related financial risk if Commission reporting requirements included information about climate-related aspects of listed derivatives products, reported transactions, and/or open positions? Are there data standards or definitions that the Commission should consider incorporating into any such reporting?*

A common challenge for companies seeking to measure their carbon emissions is the lack of standards around carbon accounting across a commodity supply chain. The CFTC could encourage more standardized carbon accounting by compelling futures exchanges to benchmark the carbon emissions associated with a commodity contract for its emissions footprint, such as scope 1, 2, and 3 emissions associated with a particular contract.<sup>3</sup> Just as liquid commodity future contracts are used for benchmarking pricing and related risks for commodity market participants,<sup>4</sup> these same contracts could be used to benchmark carbon emissions.

Additionally, it is important that registrants understand the climate-related financial risks they face from counterparties, and one of the best ways to attain this information is through regulatory disclosures. For example, clearing participants face the risk that a clearinghouse's operations will fail as a result of climate-related natural disasters, and clearinghouses face the risk that their financial institution counterparties will fail as a consequence of exposure to climate-affected end users. Accordingly, all registrants should be required to disclose information on their climate-related financial risks.

*4. Are there any climate forecasts, scenarios, or other data tools that would be useful to the Commission, registered entities, and/or registrants to better understand the exposure of any registered entities or registrants to climate-related financial risk and how those risks translate to economic and financial impacts?*

It is important for registrants to begin conducting their analyses quickly in order to learn from them and take action as soon as possible. To that end, it is not necessary that the CFTC's initial stress tests be perfect. Climate stress testing is an evolving effort that will improve after each iteration. We expect the first scenarios provided by the CFTC to be somewhat simplistic and to become more comprehensive as the agency and registrants learn from prior years' analyses and as climate scientists gather additional information.

We note that the CFTC's scenarios must account for the correlated nature of physical and transition risks. These risks can manifest themselves not just as discrete events, but also as events occurring in series and in parallel. For example, natural disasters can cause physical damage that consequently result in productivity losses, extreme heat can require increased energy for cooling that increases risks of power failures, and

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<sup>3</sup> See Alex Thornton, "Why Companies Should Be Required To Disclose Their Scope 3 Emissions," Center for American Progress, December 13, 2021, available at <https://www.americanprogress.org/article/why-companies-should-be-required-to-disclose-their-scope-3-emissions/> ("Scopes 1 and 2 generally include emissions that a company causes through its operations and energy use.... [Scope 3] emissions are associated with activities up and down the value chain from the company.").

<sup>4</sup> See, e.g., ICE, "Global Crude Benchmarks: Brent Sets the Standard," available at <https://www.theice.com/why-the-world-needs-benchmarks-and-characteristics-of-benchmarks> (last accessed July 2022).

technological innovations that reduce dependency on fossil fuels can beget further innovations.

*5. Are there any common scenarios, in addition to the scenarios developed by the Network for Greening the Financial System and/or the Financial Stability Board, that the Commission should consider incorporating into its oversight, and/or consider for registered entities and/or registrants?*

We believe the CFTC must provide at least three common scenarios to participants subject to scenario analysis:

- (1) An orderly transition that “assume[s] climate policies are introduced early and become gradually more stringent” and “[b]oth physical and transition risks are relatively subdued”;
- (2) A disorderly transition that assumes “higher transition risk due to policies being delayed or divergent across countries and sectors”; and
- (3) A hot-house scenario that “[a]ssume[s] that some climate policies are implemented in some jurisdictions, but global efforts are insufficient to halt significant global warming,” and “[c]ritical temperature thresholds are exceeded leading to severe physical risks and irreversible impacts like sea-level rise.”<sup>5</sup>

To develop these scenarios, the CFTC should also look to other jurisdictions and U.S. regulatory agencies for input on its scenarios, though it need not harmonize with those other jurisdictions. We recommend the CFTC utilize the scenarios for the National Climate Assessment as a basis for its initial scenarios,<sup>6</sup> as well as resources developed by other federal agencies, such as the Environmental Protection Agency’s summaries of research investigating the sectoral impacts of climate change.<sup>7</sup> The CFTC can also base its initial scenarios off the work of the Network for Greening the Financial System and other jurisdictions that have begun conducting their own climate scenario analyses, including the European Central Bank,<sup>8</sup> the Bank of England,<sup>9</sup> the Bank of Canada,<sup>10</sup> the Hong Kong Monetary Authority,<sup>11</sup> and others.

*6. Is a long-term (e.g., 30-year or 50-year) stress testing scenario relevant for derivatives markets subject to CFTC oversight? Is there a more relevant set of forward-looking climate*

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<sup>5</sup> NGFS, “Scenarios Portal,” available at <https://www.ngfs.net/ngfs-scenarios-portal/> (last accessed July 2022).

<sup>6</sup> U.S. Global Change Research Program, “Scenarios for the National Climate Assessment,” available at <https://scenarios.globalchange.gov/> (last accessed July 2022).

<sup>7</sup> U.S. Environmental Protection Agency, “Technical Documentation on The Framework for Evaluating Damages and Impacts (FrEDI)” (Washington: 2021), p. 15-16, available at [https://www.epa.gov/system/files/documents/2021-10/technical-documentation-on-the-framework-for-evaluating-damages-and-impacts\\_maintext.pdf](https://www.epa.gov/system/files/documents/2021-10/technical-documentation-on-the-framework-for-evaluating-damages-and-impacts_maintext.pdf).

<sup>8</sup> Spyros Alogoskoufis and others, “ECB Economy-Wide Climate Stress Test” (Frankfurt: European Central Bank, 2021), available at <https://www.ecb.europa.eu/pub/pdf/scpops/ecb.op281~05a7735b1c.en.pdf>.

<sup>9</sup> Bank of England, “Guidance for participants of the 2021 Biennial Exploratory Scenario: Financial risks from climate change” (London: 2021), available at <https://www.bankofengland.co.uk/-/media/boe/files/stress-testing/2021/the-2021-biennial-exploratory-scenario-on-the-financial-risks-from-climate-change.pdf>.

<sup>10</sup> Bank of Canada, “Using Scenario Analysis to Assess Climate Transition Risk” (Ottawa: 2021), available at <https://www.bankofcanada.ca/wp-content/uploads/2021/11/BoC-OSFI-Using-Scenario-Analysis-to-Assess-Climate-Transition-Risk.pdf>.

<sup>11</sup> Hong Kong Monetary Authority, “Pilot Banking Sector Climate Risk Stress Test” (Hong Kong: 2021), available at [https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/Pilot\\_banking\\_sector\\_climate\\_risk\\_stress\\_test.pdf](https://www.hkma.gov.hk/media/eng/doc/key-functions/banking-stability/Pilot_banking_sector_climate_risk_stress_test.pdf).

*relevant scenarios? Should these scenarios account for geographical stress? Should these scenarios try to target certain asset types? Can scenarios be customized to be more relevant for certain types of derivatives markets or registered entities?*

We believe that stress-test scenarios should provide for a broad range of plausible outcomes with respect to global emissions, tipping points, and the speed with which the global transition to clean energy occurs, and that short-, medium-, and long-term analysis windows should be set to 3-5 years, 5-10 years, and 30 years.

We do not think that the scenarios themselves should be geographic- or asset-specific, but that entities' models should take these and other factors into consideration. Accordingly, the CFTC—through the use of guidance and examinations where appropriate—must ensure that models are sufficiently rigorous so as to be useful. There are several key points that the CFTC must ensure institutions consider. First, institutions should not be allowed to “model shop.” The climate scenario analysis process is about helping institutions understand their climate-related financial risks—not about optimizing capital, penalizing institutions, or appeasing regulators. To that end, the process of creating or identifying a model is itself just as important as the outcome, and entities should be discouraged from model shopping to obtain the “optimal” outcome. Additionally, models should be asset- and location-specific and the CFTC should be clear that the assumptions made by institutions' models should be clear and transparent. Similarly, it is imperative that institutions understand any assumptions that are baked into their models so that they and the CFTC understand where models' blind spots may be. Finally, models must take into consideration network effects within the financial sector, as institutions may face rapid asset repricing that affects not only asset owners but holders of those owners' securities, debt, or derivatives exposure. Models must take all these considerations into account.

*7. Should registered entities and registrants be required to incorporate climate stress tests into their risk management processes? Do registered entities and registrants have the capability currently to conduct climate-related stress tests? If not, what would be needed in order to achieve this capability and on what timeline?*

At minimum, we believe that derivative clearing organizations (DCOs) must incorporate climate stress tests into their risk management processes, and these stress tests should have at least two primary focuses. First, stress tests should examine the climate risks that a DCO's counterparties face to ensure that they supply sufficient margin to cover their potential default resulting from climate change. Initial margin requirements today are based upon the expected volatility of the contract, but a party can still collapse even if a contract is not volatile due to the party's other activities. DCOs must know whether their members' operations face climate risk not reflected by collected initial margin. Each DCO should similarly know whether its counterparties' transactions are so concentrated in one instrument subject to climate risk (such as corn futures) that climate-caused natural disasters one season would threaten the party's solvency. Regulators must ensure that DCOs are capable of learning the current climate risk of their counterparties—perhaps through required disclosures—and that DCOs adjust their collected margin accordingly in light of changed conditions.

Second, stress tests must ensure that DCOs' operations are capable of withstanding climate-related physical risks and that they have contingency plans for the event of a climate

disaster. Like most of the financial markets today, DCOs operations are on computer servers, and the buildings in which these servers are located must have the capability of withstanding fires, floods, or other climate-caused natural disasters. According to the CFTC's own Subcommittee on Climate-Related Market Risk, the agency should ensure its stress tests "cover the operational continuity and organizational resilience of [DCOs], including organizational resilience of operations, contingency planning, and engineering resilience for facilities exposed to climate-related physical risks."<sup>12</sup>

In addition, the CFTC—through the use of guidance and examinations— has a role to play in ensuring that DCOs' models are sufficiently rigorous so as to be useful. There are several key points that the CFTC must ensure DCOs consider. First, DCOs should not be allowed to "model shop." The stress testing process is about helping DCOs understand their climate-related financial risks—not about optimizing capital, penalizing institutions, or appeasing regulators. To that end, the process of creating or identifying a model is itself just as important as the outcome, and model shopping to attain the "optimal" outcome should be discouraged. Additionally, the assumptions made by DCOs' models should be clear and transparent. Some counterparties with exposure to specific sectors will be less susceptible to climate-related financial risks than others, and data sources that aggregate information can mask important variations in data.<sup>13</sup> Similarly, it is imperative that DCOs understand any assumptions that are baked into the models they use. Finally, models must take into consideration network effects within the financial sector, as institutions may face rapid asset repricing that affects not only asset owners but holders of those owners' securities or debt.

*10. Could the Commission's existing regulations and guidance better clarify expectations regarding management of climate risks, taking into account a registered entity's or registrant's size, complexity, risk profile, and existing enterprise risk management processes? Would it be helpful for the Commission to promulgate regulations or issue guidance for registrants and/or registered entities regarding the implementation of policies and procedures to measure, track, and account for physical and transition risk?*

It is imperative that the CFTC provide registrants with the guidance they need to firmly understand and address their climate-related financial risks and explain how the CFTC intends to incorporate these risks into its examinations. The CFTC must use guidance to describe the physical and transition risks associated with climate change and explain how those risks relate to traditional financial risks with which institutions are familiar (e.g., credit risk, market risk, liquidity risk, operational risk). As the Financial Stability Oversight Council (FSOC) recently noted, although these risks "will manifest in forms familiar to financial institutions[,] ... the nature of climate risks is less familiar."<sup>14</sup>

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<sup>12</sup> Rostin Behnam and Bob Litterman, "Managing Climate Risk in the U.S. Financial System: Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission" (Washington: Commodity Futures Trading Commission, 2020), available at <https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf>.

<sup>13</sup> Task Force on Climate-Related Financial Disclosures, "The Use of Scenario Analysis in Disclosure of Climate-related Risks and Opportunities," available at <https://www.tcfhub.org/scenario-analysis/> (last accessed July 2022).

<sup>14</sup> Financial Stability Oversight Council, "Report on Climate-Related Financial Risk" (Washington: 2021), p. 24, available at <https://home.treasury.gov/system/files/261/FSOC-Climate-Report.pdf>.

Accordingly, the CFTC must provide in guidance examples of each type of risk so market participants can truly understand the risks they face.<sup>15</sup>

The CFTC must also explain to institutions how many of these risks are interconnected and that an institution may face multiple climate-related financial risks at once from the same or different counterparties. It must also stress that transition risk may come from both governmental activities (e.g., new statutes or regulations) and private actors (e.g., shifts in investor preferences).

*11. DCOs' risk management frameworks focus on market risk aspects with add-ons for liquidity, concentration, wrong way risk, settlement risk as well other asset class appropriate risks. Should these risk management frameworks directly incorporate climate-related risk specific to clearing member firms, or their clients' climate-related risks, and, if so, how?*

DCOs face climate-related financial risks from clearing members as counterparties, which in turn face risks from their clients. We believe DCOs' risk management frameworks should ensure that DCOs collect sufficient margin from clearing members to cover their potential default resulting from climate change. Initial margin requirements today are based upon the expected volatility of the contract, but a party can still collapse even if a contract is not volatile due to the party's other activities. DCOs must know whether their members' operations face climate risk not reflected by collected initial margin. Each DCO should similarly know whether its counterparties' transactions are so concentrated in one instrument subject to climate risk (such as corn futures) that climate-caused natural disasters one season would threaten the party's solvency.

Further, regulators must ensure that DCOs are capable of learning the current climate risk of their counterparties—perhaps through required disclosures—and that DCOs adjust their collected margin accordingly in light of changed conditions.

*12. Should the Commission consider amending its minimum capital and liquidity requirements to better recognize climate-related risks?*

Capital and liquidity requirements are critical components of financial regulation that require financial institutions to hold minimum amounts of capital as a percentage of their assets to ensure that firms are not overly leveraged and to maintain certain percentages capital in highly-liquid assets to ensure operations for a minimum period of time. CFTC regulations require clearing houses, brokers, and certain market participants to meet capital and/or liquidity requirements. However, the CFTC's requirements currently do not take into account climate risk.<sup>16</sup> The CFTC has authority under Dodd-Frank to impose capital and liquidity requirements for entities that deal in derivatives,

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<sup>15</sup> See generally Americans for Financial Reform Education Fund and others, "Recommendations for Supervisory Guidance for Bank Regulators" September 2021, p. 5, available at <https://www.nrdc.org/sites/default/files/supervision-guidance-climate-risk-202109.pdf>.

<sup>16</sup> Graham Steele, "Confronting the 'Climate Lehman Moment': The Case for Macroprudential Climate Regulation" *Cornell Journal of Law and Public Policy* 30 (2020): 109-157, available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3542840](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3542840).

and it should use that authority to incorporate climate risk into asset weights and potentially require higher capital ratios based on firms' climate risk.<sup>17</sup>

But further, and as explained above in response to question 11, it is imperative that DCOs have a sufficient understanding of their counterparties' climate risks. Absent the ability to obtain this information (through, for example, new or enhanced disclosure requirements), the CFTC should consider *further* raising DCOs' minimum capital and liquidity requirements.

*13. The Commission staff is evaluating the Commission's public disclosure, including public information, requirements to assess whether existing requirements need to be updated to effectively provide decision-useful, consistent, and comparable information on climate-related risks. Are there ways in which updated disclosure requirements could aid market participants in better assessing climate-related risks?*

Derivatives contracts give rise to counterparty risk in that counterparties may fail to fulfill their side of a contract. For example, it is easy to imagine an institution entering into weather derivative contracts only to find that its counterparty's balance sheet is negatively correlated with the risk it is insuring against (e.g., it has assets in climate-affected industries or geographic locations). It is therefore important that all entities can effectively understand their climate-related counterparty risks.

The CFTC must address this information disparity for both centrally cleared and over-the-counter (OTC) derivatives. As explained above, DCOs face climate-related financial risks from clearing members as counterparties, which in turn face risks from their clients, and DCOs need access to information that will help them evaluate that counterparty risk. Rather than expecting bilateral negotiations between DCOs and clearing members, the CFTC should consider requiring all registrants to disclose their climate-related risks so that DCOs can set margin requirements accordingly. The Securities and Exchange Commission's (SEC) proposed climate disclosure rule provides good examples of the types of information that clearing members should be requesting from their clients,<sup>18</sup> including information about how corporate clients' governance policies account for climate risks; the climate-related physical and transition risks reasonably likely to have a material impact on clients' current and expected assets and operations; clients' strategies for addressing those risks; clients' Scopes 1, 2, and 3 greenhouse gas emissions (excluding offsets or renewable energy credits); and any other risks that may affect borrowers' creditworthiness in the future. This requested information should relate to both physical- and transition-related risks. Clearing members should also request geolocation information for significant borrower infrastructure (including significant infrastructure up and down the value chain) and information about whether borrowers have applied for climate-related insurance but have been rejected. This information can be used by clearing members to understand their own climate-related financial risks from

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<sup>17</sup> Tyson Slocum and David Arkush, "Re: Comments for the Climate-Related Market Risk Subcommittee Under the Market Risk Advisory Committee," Public Citizen, May 14, 2020, available at <https://www.citizen.org/article/cftc-should-adjust-capital-and-margin-requirements-to-reflect-climate-risks/>.

<sup>18</sup> Securities and Exchange Commission, "The Enhancement and Standardization of Climate-Related Disclosures for Investors," *Federal Register* 87 (69) (2022): 21334-21473, available at <https://www.govinfo.gov/content/pkg/FR-2022-04-11/pdf/2022-06342.pdf>.

counterparties. This information can then be provided to DCOs, to help them understand the risks they face from clearing members.

Ensuring that DCOs understand clearing members' climate-related risks does nothing to address climate-related counterparty risks in the OTC market, however. The CFTC should consider enacting similar disclosure requirements that permit traders to understand these risks, including disclosures by end users. These disclosures should be similar to those described above.

*18. What derivatives products are currently used to manage climate-related financial risk, facilitate price discovery for climate-related financial risk, and/or allocate capital to climate-benefiting projects? Please explain how these products are used, negotiated, and traded. What, if any, conditions, including market practices and/or regulatory requirements, may constrain or promote their expanded use or development to address climate-related financial risk? Are there ways in which Commission regulations or guidance could better address particular considerations relating to the listing of these types of products for trading?*

Financial institutions and real-economy businesses can hedge their climate-related risks using derivatives. However, hedging cannot not remove risk entirely from balance sheets, as any contract to transfer credit risk to another entity gives rise to counterparty risk in that the counterparty may fail to fulfill its side of the contract. It is easy to imagine an institution entering into weather derivative contracts only to find that its counterparty's balance sheet is negatively correlated with the risk it is insuring against and could fail at just the time that the institution need protection. Such a situation does not entirely remove risk from institutions' balance sheet but instead removes the credit risk and applies counterparty risk. The Commission should continue to investigate ways in which new products, such as weather and renewable energy derivatives, can be used to allow companies to hedge climate-related risks.<sup>19</sup>

The use of climate derivatives raises systemic risk concerns. Just as how in the leadup to the 2008 financial crisis many large financial institutions relied on credit risk protection offered by AIG,<sup>20</sup> one can imagine many large financial institutions today relying on a single institution for climate-risk protection. If those institutions all rely on one insurer and that insurer does not have a sufficiently strong balance sheet, none would be fully protected.

*19. Are there customer protections or other guardrails that the Commission could consider to promote market integrity in climate-related derivatives products?*

The most direct way that retail investors interact with derivatives is through commodity trading advisors and commodity pools, which are pooled investments in commodity derivatives and foreign exchange contracts and are managed by commodity pool operators (CPOs). The CFTC should undertake efforts to ensure that advisors and

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<sup>19</sup> Climate-Related Market Risk Subcommittee, "Managing Climate Risk in the U.S. Financial System," CFTC, Sept. 9, 2020, available at <https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf>.

<sup>20</sup> Adam Davidson, "How AIG fell apart," Reuters, September 18, 2008, available at <https://www.reuters.com/article/us-how-aig-fell-apart-idUSMAR85972720080918>.

CPOs adequately address climate-related financial risks and speculators' environmental preferences. It can do this in two concrete ways.

First, the CFTC should require advisors and CPOs to adopt and maintain investment policies related to climate-related financial risks. Specifically, advisors and CPOs should be required to explain in their disclosure documents (e.g., those under sections 4.24 and 4.34) how they identify, assess, and address climate-related risks. CPOs should also be required to disclose how they vote, do not vote, or otherwise engage with companies of portfolio securities consistent with their climate-related investment policies. These disclosures should be reviewed and approved at least annually, and firm activities should be audited for compliance. Requiring advisors and CPOs to maintain climate-related policies would allow speculators to fully understand the climate risks of their investments and proceed accordingly.

Additionally, the CFTC should require advisors and CPOs to identify clients' and beneficiaries' climate-related preferences so that they may effectuate those preferences, and to periodically check whether those preferences have changed.

Finally, the CFTC should employ its existing regulatory authority or consider promulgating new rules to address fraud and market manipulation in carbon markets. Carbon markets are notoriously riddled with fraud, including the manipulation of measurements to claim more carbon credits from a project than were obtained or misleading claims about the financial and environmental benefits of such investments, among other issues.<sup>21</sup> Problems such as these will likely continue to persist so long as there are no stringent standards across the voluntary carbon marketplace. We detail issues related to fraud and manipulation in response to Question 23.

*22. Are there way in which the Commission could enhance the integrity of voluntary carbon markets and foster transparency, fairness, and liquidity in those markets?*

*23. Are there aspects of the voluntary carbon markets that are susceptible to fraud and manipulation and/or merit enhanced Commission oversight?*

*24. Should the Commission consider creating some form of registration framework for any market participants within the voluntary carbon markets to enhance the integrity of the voluntary carbon markets? If so, what would a registration framework entail?*

The CFTC has a broad set of tools to address many of the problems occurring today in voluntary carbon markets. In response to Questions 22, 23, and 24, we outline four central issues facing these markets and propose actions the Commission can take to address them.

## **I. Ensure standards meet greenhouse gas reduction goals**

In order to be an effective means of reducing carbon emissions, commoditized carbon offsets must represent a verifiable and unique claim to carbon that is permanently

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<sup>21</sup> INTERPOL Environmental Crime Programme, "Guide to Carbon Trading" (Lyon, France: 2013), available at <https://www.interpol.int/Media/Files/Crime-areas/Environmental-crime/Guide-to-Carbon-Trading-Crime-2013>.

removed from the atmosphere and that would not have been removed absent the intention to create and sell an offset. This statement accords to the principle that a carbon offset must be verifiable, unique, permanent, and additional. However, some carbon offset standards appear to permit projects that fail to meet one or more of these requirements, and as a result, offset credits may not actually deliver their claimed emissions reductions.

The CFTC should consider evaluating private-sector standards to determine whether the standards, if followed, will truly result in verifiable, unique, additional, and permanent emissions reductions. The CFTC could write guidance that specifically establishes how to measure quality as well as what activities may constitute fraud or manipulation. For example, such guidance could establish a clear definition of what constitutes actual permanence—particularly for forest-based offsets, which are inherently at risk to logging or fires—and could establish strict procedures for determining additionality, perhaps with a rebuttable presumption that certain kinds of avoided emissions projects are not additional. Also, guidance could outline the CFTC’s opinion on what constitutes a high-quality offset and whether certain types of offsets should be eligible to be used for derivatives contracts.

Given the well-documented problems with offsets not meeting the promises made by issuers that have been laid out in academic research and media reports, CFTC guidance on marketing claims and fraud would be especially useful. In its “Green Guides” for environmental marketing claims, the Federal Trade Commission (FTC) writes that “it is deceptive to misrepresent, directly or by implication, that a carbon offset represents emission reductions that have already occurred or will occur in the immediate future ... [and] it is deceptive to claim, directly or by implication, that a carbon offset represents an emission reduction if the reduction, or the activity that caused the reduction, was required by law.”<sup>22</sup> The CFTC could expand on this guidance to explicitly define what factors would cause an offset to be fraudulent under the Commodity Exchange Act—for example, if a project developer clearly did not need the funding from the sale of the credit to complete the project or sells multiple credits to different buyers based on the same project.

Alternatively, the CFTC could model guidance on the U.S. Department of Agriculture’s food quality labels, which it uses for a variety of commodities such as beef and corn.<sup>23</sup> For example, offset projects that involve carbon dioxide scrubbing or permanent removal and storage could receive a high-quality label, while avoided deforestation projects with significant risks of leakage, non-permanence, and questionable additionality could receive a low-quality label. In doing so, the CFTC could establish that only the types of offset projects that receive a high-quality label should be eligible to be included in derivatives contracts or could establish a rebuttable presumption that offsets with low quality labels are susceptible to fraud and manipulation.

We note that although the CFTC could play a beneficial role in establishing higher standards, we caution that—given the current problems with existing protocols used in the voluntary carbon market—the CFTC should be careful to avoid endorsing or giving the impression of an endorsement of an existing standard that sounds good on paper but still

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<sup>22</sup> Federal Trade Commission, “Guides for the Use of Environmental Marketing Claims,” p. 9, available at <https://www.ftc.gov/sites/default/files/attachments/press-releases/ftc-issues-revised-green-guides/greenguides.pdf> (last accessed August 2022).

<sup>23</sup> U.S. Department of Agriculture, “Grades and Standards,” available at <https://www.ams.usda.gov/grades-standards> (last accessed August 2022).

fails to produce verifiable, permanent, and additional offsets. If the CFTC determines that it is impractical or too difficult to develop its own definition of a high-quality offset, it could alternatively use guidance to clearly establish what standards or protocols created by private entities currently on the market are not suitable for issuing offsets that are free from fraud or manipulation. In doing so, the CFTC could use the growing body of academic research and investigative reporting on over-crediting of offsets based on insufficiently rigorous protocols.

In short, guidance would be greatly beneficial to market participants by sending a clear signal discouraging the sale of offsets that cannot deliver on what they promise.

## **II. Enhance oversight of offset registries and brokers**

The Commission may also use its existing authority to oversee most voluntary offset market standard setters. The four main offset standards used in voluntary carbon markets—Verified Carbon Standard, American Carbon Registry, Climate Action Reserve, and Gold Standard—play an outsized role in the marketplace. These entities not only set the scientific standards used to “verify” an offset project, but they also list credits on their registries and track their ownership throughout their lifecycles. For this reason, they play a critical role in carbon offset futures markets, since they essentially serve the function of “delivery points” at which the ownership of credits is exchanged when a future contract is settled.<sup>24</sup>

These entities could be subject to direct oversight by CFTC.<sup>25</sup> Particularly, the CFTC can require that these entities engage in practices to “prevent manipulation, price distortion, and disruptions of the delivery or cash-settlement process through market surveillance, compliance, and enforcement practices and procedures.”<sup>26</sup> CFTC oversight over these currently unregulated registries would be a critical step forward in upholding the integrity of offset-based derivatives. Without effective oversight of the entities that keep track of the underlying offsets, investors cannot be certain that the derivatives are actually representing what they claim—that is, the future delivery of offsets representing avoided or removed carbon emissions.

Relatedly, the CFTC may also wish to investigate the role of businesses acting as brokers in the marketplace. These companies act as intermediaries in the spot market. When a customer makes a purchase, the broker will buy the offset on the customer’s behalf and then immediately retire the credit on whichever registry it exists.<sup>27</sup> The broker then sends the customer some form of certificate signifying that it has offset a certain quantity of carbon emissions.<sup>28</sup> These companies provide a service that may make the

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<sup>24</sup> Berkeley Carbon Trading Project, “Voluntary Registry Offsets Database,” available at <https://gspp.berkeley.edu/faculty-and-impact/centers/cepp/projects/berkeley-carbon-trading-project/offsets-database> (last accessed August 2022).

<sup>25</sup> ISDA, “Voluntary Carbon Markets: Analysis of Regulatory Oversight in the US” (New York: 2022), available at <https://www.isda.org/a/93WgE/Voluntary-Carbon-Markets-Analysis-of-Regulatory-Oversight-in-the-US.pdf>.

<sup>26</sup> Legal Information Institute, “17 CFR § 38.250 - Core Principle 4,” available at <https://www.law.cornell.edu/cfr/text/17/38.250> (last accessed August 2022).

<sup>27</sup> See, for example, Pachama, “Frequently Asked Questions,” available at <https://pachama.com/faq/> (last accessed August 2022).

<sup>28</sup> See, for example, Terrapass, “Frequently Asked Questions,” available at <https://terrapass.com/about-us/faq-emissions-reduction> (last accessed August 2022).

process of purchasing offsets easier for individuals or businesses, but their existence raises certain concerns.

First, since these companies purchase offsets on someone else's behalf, the registry might list the broker as the purchaser and retiree of the credit—not the clients who originally paid for them. This means that investors seeking to evaluate the legitimacy of a businesses' net zero claims based on offset purchases would not be able to independently verify that that business purchased those offsets.<sup>29</sup> Second, many of these companies sell credits to their customers at a significant mark-up, meaning that a large amount of the money that businesses are supposedly spending on offsets are padding the profits of these companies instead of going directly to project developers.<sup>30</sup> Finally and importantly, without sufficient government oversight of these brokers, there may be no way to guarantee that a broker is not engaging in double-counting or selling illegitimate offsets to buyers.

The risks associated with these businesses may fall within the CFTC's enforcement authority over commodity cash markets. If a broker, for example, purchases and retires a credit from a project developer but then sells the "rights" to that offset to more than one individual or businesses—or, if a broker accepts payments from customers seeking offsets but does not actually purchase credits (while telling customers that they have)—those would appear to be fraudulent activities involving commodities, and the CFTC would have the authority to bring an enforcement action against that broker. Likewise, given the significant variation and constant fluctuations in prices across the marketplace, unscrupulous brokers could be engaging in activities to manipulate prices (for example, by buying cheap offsets and then making false or misleading statements that drive up the price of the offsets)—activities that also may fall within the CFTC's enforcement authority.

### **III. Address rampant fraud and manipulation in carbon markets**

Governments, NGOs, and researchers have long expressed concern about fraud in carbon markets.<sup>31</sup> The Federal Trade Commission first warned of the potential for fraud in carbon offsets markets over a decade ago.<sup>32</sup> Notably, a 2013 report by the international law enforcement agency INTERPOL listed several factors as making carbon markets "particularly vulnerable to fraud and other illegal activities,"<sup>33</sup> including:

- Fraudulent manipulation of measurements to claim more carbon credits from a project than were actually obtained;
- Sale of carbon credits that either do not exist or belong to someone else;
- False or misleading claims with respect to the environmental or financial benefits of carbon market investments; and

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<sup>29</sup> Sadie Frank, Danny Cullenward, and Freya Chay, "Why carbon offset disclosure matters," Carbon Plan, February 8, 2022, available at <https://carbonplan.org/research/offset-disclosure-needs>.

<sup>30</sup> Luke Barratt and Joe Sandler Clarke, "How middlemen carbon brokers take a cut from money meant to offset emissions," Uearthed, February 5, 2022, available at <https://unearthed.greenpeace.org/2022/05/02/carbon-offsetting-market-climate/>.

<sup>31</sup> Forbes, "Combating Complexities Of Carbon Fraud," June 16, 2010, available at <https://www.forbes.com/2010/06/16/cap-and-trade-fraud-entrepreneurs-technology-wharton.html>.

<sup>32</sup> Christopher Joyce, "Carbon Offsets: Government Warns of Fraud Risk," NPR, January 3, 2008, available at <https://www.npr.org/2008/01/03/17814838/carbon-offsets-government-warns-of-fraud-risk>.

<sup>33</sup> INTERPOL Environmental Crime Programme, "Guide to Carbon Trading" (Lyon, France: 2013), available at <https://www.interpol.int/Media/Files/Crime-areas/Environmental-crime/Guide-to-Carbon-Trading-Crime-2013>.

- Exploitation of weak regulations in the carbon market to commit financial crimes, such as money laundering, securities fraud or tax fraud.

Examples abound of cases involving the distribution of offsets that appear to meet these conditions. In one case, a New Hampshire timber company was paid millions of dollars to not cut down trees from a forest that, because of the ruggedness of the terrain, it would have been extremely difficult and therefore economically prohibitive for the company to have cut down those trees anyway.<sup>34</sup> In another case, a conservation nonprofit that maintained a forest claimed that it was in a position to cut down significantly more trees than it plausibly ever would—yet was still paid to not cut down those trees.<sup>35</sup> In 2018, a report by the San Diego Union-Tribune found “numerous instances where companies and nonprofits selling offsets didn’t shrink their carbon footprint” as a result of funding from California’s carbon offset program.<sup>36</sup>

With carbon offset derivatives now being traded on the market, the CFTC should use its authority under the Commodity Exchange Act to engage in enforcement actions cracking down on individual project fraud and manipulation in voluntary carbon markets.<sup>37</sup> Just as the CFTC often engages in anti-fraud enforcement actions against entities selling precious metals that do not deliver on the quality promised to buyers,<sup>38</sup> the agency can use that same authority to enforce against carbon offsets that clearly do not deliver on the emissions reductions promised.

To do so, the CFTC could apply its rule on “Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices and Prohibition on Price Manipulation,” to deceptive reporting on offset credits.<sup>39</sup> This rule extends the definition of unlawful manipulation to include “Deliver[ing] or caus[ing] to be delivered, or attempt to deliver or cause to be delivered, for transmission through the mails or interstate commerce, by any means of communication whatsoever, a false or misleading or inaccurate report concerning crop or market information or conditions that affect or tend to affect the price of any commodity in interstate commerce, knowing, or acting in reckless disregard of the fact that such report is false, misleading or inaccurate.”<sup>40</sup> The sale of

<sup>34</sup> Ben Elgin, “This Timber Company Sold Millions of Dollars of Useless Carbon Offsets,” Bloomberg, March 17, 2022, available at <https://www.bloomberg.com/news/articles/2022-03-17/timber-ceo-wants-to-reform-flawed-carbon-offset-market>.

<sup>35</sup> Lisa Song and James Temple, “A nonprofit promised to preserve wildlife. Then it made millions claiming it could cut down trees,” MIT Technology Review, May 10, 2021, available at <https://www.technologyreview.com/2021/05/10/1024751/carbon-credits-massachusetts-audubon-california-logging-co2-emissions-increase/>.

<sup>36</sup> Joshua Emerson Smith, “California’s carbon-credit market often pays for greenhouse gas reductions that would’ve happened anyway,” *The San Diego Union-Tribune*, October 7, 2018, available at <https://www.sandiegouniontribune.com/news/environment/sd-me-carbon-credits-20180917-story.html>.

<sup>37</sup> Todd Phillips, “A Climate and Competition Agenda for the Commodity Futures Trading Commission,” Center for American Progress, February 1, 2022, available at <https://www.americanprogress.org/article/a-climate-and-competition-agenda-for-the-commodity-futures-trading-commission/>.

<sup>38</sup> ISDA, “Voluntary Carbon Markets: Analysis of Regulatory Oversight in the US.”

<sup>39</sup> Suppan, “Voluntary CO<sub>2</sub> emissions offset trading: The CFTC must examine risks of deceptive emissions reduction reporting”; Commodity Futures Trading Commission, “Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices and Prohibition on Price Manipulation,” *Federal Register* 76 (135) (2011): 41398-41411, available at <https://www.cftc.gov/sites/default/files/idc/groups/public/@lrfederalregister/documents/file/2011-17549a.pdf>.

<sup>40</sup> Commodity Futures Trading Commission, “Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices and Prohibition on Price Manipulation,” p. 41410.

offsets based on projects by issuers who know that those projects are not truly permanent or additional should fall under this definition.

Alternatively, CFTC could promulgate a new rule defining what constitutes fraud and manipulation in the sale and trading of carbon offsets. Such a rule could, for example, establish a rebuttable presumption that offsets that are most susceptible to problems with permanence, leakage and, and additionality—such as avoided deforestation projects—are fraudulent because they cannot reliably guarantee they are reducing the emissions promised.<sup>41</sup>

To investigate offset projects and issuers to bring enforcement cases, the CFTC should hire climate and climate finance experts who can objectively evaluate whether projects are really meeting goals promised in offset contracts and whether the protocols used by standard setters are systematically leading to more offset credits being issued and sold to customers than actually represent any genuine carbon removal or avoided emissions. The agency should investigate the extent to which standard-setter organizations are systematically allowing offsets onto their registries that do not represent genuine carbon removals. The CFTC could then engage in enforcement actions to crack down on cases in which lax standards have led to the crediting of offsets that are likely fraudulent. Doing so would send a signal to the rest of the market that issuing offsets that do not stand up to the highest possible standards of verifiability, permanence and additionality could lead to legal liability for registries.

Additionally, the CFTC should consider investigating and bringing enforcement actions against projects that blatantly fail to deliver on promises. While it is likely impossible to do so across the entire market, the CFTC could start with cases that have already been publicly highlighted through investigative reporting.<sup>42</sup> The CFTC enforcing against the most blatant cases of fraudulent sales of offsets could provide a disincentive for developers to create new projects that are not genuinely additional or permanent. Even setting a precedent with a small number of cases that over-crediting of offsets constitutes fraud or manipulation could have a significant impact on the market as a whole.

#### **IV. Employ a high-level of scrutiny in the certification of derivatives products**

The CFTC should also be extremely selective in only allowing certification of derivatives products based on high-quality offsets. Importantly, in addition to periodically monitoring designated contract markets (DCMs) for compliance with its rules, the CFTC also has statutory authority to set listing standards for exchanges.<sup>43</sup> The CFTC has authority to approve or disapprove of listing standards of registered exchanges, and it could use this authority to require that DCMs have listing standards that prohibit the listing of derivatives whose underlying offsets are susceptible to manipulation and require

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<sup>41</sup> Phillips, “A Climate and Competition Agenda for the Commodity Futures Trading Commission.”

<sup>42</sup> See, for example, Song and Moura, “An Even More Inconvenient Truth”; Elgin, “This Timber Company Sold Millions of Dollars of Useless Carbon Offsets”; Song and Temple, “A nonprofit promised to preserve wildlife. Then it made millions claiming it could cut down trees”; Ben Elgin, “These Trees Are Not What They Seem,” Bloomberg, December 9, 2020, available at <https://www.bloomberg.com/features/2020-nature-conservancy-carbon-offsets-trees/#xj4y7vzkg>; Jacobs, “The Forest Mafia: How Scammers Steal Millions Through Carbon Markets.”

<sup>43</sup> <https://www.law.cornell.edu/cfr/text/17/40.2>

any derivatives to only include high-quality offsets—potentially excluding offsets like forest-based project that are most susceptible to permanence and additionality problems.

The CFTC allows DCMs to self-certify that new derivatives products comply with CFTC and exchange rules without a formal review process by the agency's staff, and the CFTC has recently allowed self-certification for new offset-based futures contracts.<sup>44</sup> However, one of the CFTC's "core principles" that derivatives products must comply with to be certified states explicitly that "The board of trade shall list on the contract market only contracts that are not readily susceptible to manipulation,"<sup>45</sup> and CFTC regulations provide that derivatives should "meet[] the risk management needs of prospective users and promote[] price discovery of the underlying commodity."<sup>46</sup> Given the inherent risk of fraud and manipulation in the vast majority of offsets today and the fact that physical delivery of some derivatives contracts today may not result in receipt of usable offsets, the CFTC should not allow self-certification of offset derivatives and instead engage in a thorough and formal review process for any new proposed contract. In doing so, the CFTC could set a rebuttable presumption that new contracts are susceptible to manipulation, requiring a higher burden for the issuer to demonstrate that the underlying offsets are reliable.

Price discovery is very difficult in the voluntary carbon market. Without price discovery, the value of derivatives as a tool for hedging is significantly diminished if not impossible, meaning that offsets-based derivatives are mostly likely going to be used mostly for pure speculation.<sup>47</sup> For this reason, it is unclear what beneficial purpose these products would be serving to the market or to the environment, and the CFTC should carefully examine these factors when evaluating new proposals. Also, given the significant concerns with the quality of the underlying assets, the CFTC has a compelling interest in closely monitoring offset-based derivatives, particularly in the still-early stages of the market.

One of the main causes of the 2008 Global Financial Crisis was the proliferation of derivatives based on risky assets, and the CFTC must ensure that similar irresponsible market activity does not occur again in the realm of carbon offsets.

*25. Are digital asset markets creating climate-related financial risk for CFTC registrants, registered entities, other derivatives market participants, or derivatives markets? Are there any aspects of climate-related financial risk related to digital assets that the Commission should address within its statutory authority? Do digital assets and/or distributed ledger technology offer climate-related financial risk mitigating benefits?*

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<sup>44</sup> Suppan, "Voluntary CO<sub>2</sub> emissions offset trading: The CFTC must examine risks of deceptive emissions reduction reporting"; Suppan, "What underlies the underlying (asset) of CO<sub>2</sub> emissions offset futures contracts?"

<sup>45</sup> Legal Information Institute, "Appendix B to Part 38 - Guidance on, and Acceptable Practices in, Compliance With Core Principles," available at [https://www.law.cornell.edu/cfr/text/17/appendix-B to part 38](https://www.law.cornell.edu/cfr/text/17/appendix-B%20to%20part%2038) (last accessed August 2022).

<sup>46</sup> 17 CFR Appendix C to Part 38

<sup>47</sup> John Kostyack, Lee Reiners, and Steve Suppan, "Comments to the Commodity Futures Trading Commission on the Proposed Creation of a Carbon Markets Subcommittee of the Energy and Environmental Markets Advisory Committee," The FinReg Blog, September 23, 2021, available at <https://sites.law.duke.edu/thefinregblog/2021/09/23/comments-to-the-commodity-futures-trading-commission-on-the-proposed-creation-of-a-carbon-markets-subcommittee-of-the-energy-and-environmental-markets-advisory-committee/>.

At their core, blockchains are simply a new form of technology that are used to denote or transfer ownership of assets. The technology blockchains use is unique in that data are shared among the nodes of computer networks and organized as irreversible chains of blocks, but blockchains are functionally similar to traditional databases or ledgers because their basic purpose is to store information.<sup>48</sup> The novelty and innovative nature of the technology does not change the fact that assets that are stored on blockchains are the same types of assets that have always existed, including commodities.<sup>49</sup>

However, unlike traditional databases and ledgers, there is significant evidence that the process of solving a repetitive mathematical function to record new transactions that is required for public blockchains—known as mining, hashing, or validating—can be extremely energy intensive, use significant amounts of electricity, and therefore have a large carbon footprint. By some estimates, Bitcoin alone is responsible for 0.40% of the world’s electricity consumption, has a carbon footprint equal to that of Denmark or New Zealand, and in a single transaction uses more energy than 100,000 Visa transactions.<sup>50</sup> By another estimate, the carbon footprint of a single mined Bitcoin is 334 metric tons of carbon dioxide, while the carbon footprint of mining gold valued at the equivalent of one Bitcoin is only 16 tons of carbon dioxide.<sup>51</sup> There is little doubt that this level of energy consumption is contributing to global climate change and, accordingly, the climate-related risks faced by market participants and the derivatives infrastructure.

Given that many crypto assets are commodities, the CFTC should incentivize the creation of energy-efficient blockchains over their energy-intensive alternatives. One way the CFTC could do this is by requiring designated contact markets and swap execution facilities to disclose the environmental impacts of the blockchains of crypto assets underlying derivatives (crypto derivatives), in terms of kilowatt-hours due to the computational power necessary to transact on the blockchain used.<sup>52</sup> The CFTC could also require exchanges to only list crypto derivatives with minimum energy efficiency standards, or permit exchanges to only list assets that use, or agree to establish a plan to transition to, proof-of-stake mining instead of the more energy-intensive proof of work process. Because listed derivatives are much easier for the public to trade than those that are not listed on exchanges, imposing listing standards and the resulting potential of lost business would likely incentivize issuers to migrate to more energy-efficient technologies, which could in turn have the effect of reducing the overall carbon footprint of crypto assets.

The CFTC should also be wary of efforts to trade crypto “tokenized” carbon offsets. Recently, several projects have arisen in which crypto issuers purchase carbon offsets and

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<sup>48</sup> Adam Hayes, “Blockchain Explained,” Investopedia, March 5, 2022, available at <https://www.investopedia.com/terms/b/blockchain.asp>.

<sup>49</sup> Todd Phillips and Alex Thornton, “Congress Must Not Provide Statutory Carveouts for Crypto Assets,” Center for American Progress, March 1, 2022, available at <https://www.americanprogress.org/article/congress-must-not-provide-statutory-carveouts-for-crypto-assets/>.

<sup>50</sup> Alice Feng, “Is Cryptomining Harming the Environment?” Princeton Student Climate Initiative, February 27, 2021, available at <https://psci.princeton.edu/tips/2021/2/27/is-cryptomining-harming-the-environment>.

<sup>51</sup> Digiconomist, “Bitcoin Energy Consumption Index,” available at <https://digiconomist.net/bitcoin-energy-consumption> (last accessed July 2022).

<sup>52</sup> Legal Information Institute, “15 U.S.C. § 78s(c),” available at <https://www.law.cornell.edu/uscode/text/15/78s> (last accessed July 2022).

turn them into coins on a blockchain which can be bought and sold like a commodity.<sup>53</sup> Supporters of these projects argue that migrating carbon offset markets to the blockchain help make markets more transparent and liquid. There is even some evidence to suggest that projects like KlimaDAO played a role in driving up carbon credit prices,<sup>54</sup> with the implication that these projects benefit the environment by increasing access to and demand for carbon offsets and making sustainable projects more profitable.<sup>55</sup> However, there is not enough evidence to suggest that moving carbon markets to the blockchain has a positive effect on reducing climate emissions, as they are simply offering a different type of technology to serve as a database for carbon offset markets and do not solve the copious problems associated with offsets.<sup>56</sup>

Worse, the process of moving carbon offsets to the blockchain may be creating perverse incentives that contribute to the problems of quality assurance and additionality. The price of “nature-based” offsets has risen from \$4.65 per ton to over \$14 over the past year, and the result is that traders looking to take advantage of price increases have begun to tokenize older and cheaper offsets known as junk credits that might not actually represent the carbon emissions they claim.<sup>57</sup> While speculators seek to capitalize on price changes—in part by purchasing derivative products that are based the price of carbon offsets—the rush to tokenize low-quality offsets could lead to unsuspecting buyers being sold credits that cannot be reasonably guaranteed to represent carbon reduction, especially if purchasers of tokenized offsets don’t know that the underlying credits are junk.<sup>58</sup> Thus, some buyers who purchase tokenized credits to offset additional pollution that they themselves create may in fact be contributing to more emissions they otherwise would have.

*27. Consistent with the CFTC's statutory mandate and regulatory authority, are there any climate-related financial impacts or potential policy solutions addressed to climate-related financial impact that the Commission should consider as it pertains to financially vulnerable populations in particular? Are there any steps that the Commission should consider when assessing how the impact of climate change on the derivatives markets and/or underlying commodities markets, or proposed policy solutions to address such impact, may affect financially vulnerable populations?*

Recent research has found that a warming climate will result in “dramatic increases in the variability of corn yields from one year to the next...which could lead to price hikes and global shortages.”<sup>59</sup> Similarly, there is evidence that “extreme weather

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<sup>53</sup> See, for example, Toucan, “About Toucan,” available at <https://toucan-protocol.notion.site/About-Toucan-68694a4ef18f4613a5f5b594a2d4a407> (last accessed July 2022); Moss, “Crypto’s Carbon Emissions Addressed by One River and Moss,” available at <https://moss.earth/one-river-and-moss/> (last accessed July 2022); KlimaDAO, “Welcome to KlimaDAO,” available at <https://www.klimadao.finance/> (last accessed July 2022).

<sup>54</sup> Sam Kessler, “Crypto Carbon: Can Blockchain Networks Fix Carbon Offsets?” CoinDesk, March 27, 2022, available at <https://www.coindesk.com/layer2/miningweek/2022/03/27/crypto-carbon-can-blockchain-networks-fix-carbon-offsets/>.

<sup>55</sup> KlimaDAO, “Welcome to KlimaDAO.”

<sup>56</sup> Kessler, “Crypto Carbon: Can Blockchain Networks Fix Carbon Offsets?”

<sup>57</sup> Camilla Hodgson, “Carbon-linked crypto tokens alarm climate experts,” *Financial Times*, April 16, 2022, available at <https://www.ft.com/content/ed76933e-43ed-4e72-ac19-ef47a731a595>.

<sup>58</sup> Ibid.

<sup>59</sup> Hannah Hickey, “Warmer climate will dramatically increase the volatility of global corn crops,” *Stanford Earth Matters Magazine*, June 11, 2018, available at <https://earth.stanford.edu/news/warmer-climate-will-dramatically-increase-volatility-global-corn-crops#gs.m2zpzc>.

events and unusual seasonal patterns [impact] both gas demand and supply,” again causing price volatility from one season to the next and making pricing predictions difficult.<sup>60</sup> This volatility will harm regular customers who rely on commodities for sustenance, heating, and power. It will particularly harm the most financially vulnerable who rely on raw commodities for food, rather than other goods with prices less attuned to commodity volatility.<sup>61</sup>

The CFTC should address this increased commodity volatility resulting from climate change. There are two specific actions the CFTC can take. First, it should undertake a full economic analysis of the systemic impact of speculation in the form of passive investments, including the so-called massive passives that have the potential to raise commodity prices on American consumers.<sup>62</sup> The CFTC should consider whether regulations are necessary to limit this type of speculation to achieve an appropriate balance between the risks to the economy and any benefits. These risks have been particularly pronounced during the COVID-19 pandemic due to heightened costs across the supply chain.

Second, the CFTC should lower position limits on physically settled derivatives, explicitly curbing financial institutions from speculating. The Dodd-Frank Act allowed the CFTC to set limits on the number of derivative contracts into which any one speculator can enter and in 2020, the CFTC finalized position limits for 25 physically settled commodities, providing that no trader may maintain contracts exceeding 25 percent of the estimated spot market supply.<sup>63</sup> Unfortunately, limiting traders to 25 percent of spot market supply still allows for an unnecessarily concentrated market, and the CFTC should rewrite this rule to further reduce position limits to ensure a competitive marketplace.

The most common metric for determining market concentration is the Herfindahl-Hirschman Index (HHI). According to the Federal Trade Commission and U.S. Department of Justice Antitrust Division’s horizontal merger guidelines, a market with an HHI score less than 1,500 is deemed competitive, or technically “unconcentrated”; a score of 1,500 to 2,500 is moderately concentrated; and a score greater than 2,500 is highly concentrated.<sup>64</sup>

The maximum HHI score possible under the CFTC’s position limits rule is 2,500, meaning that the CFTC is implicitly permitting a market on the cusp of being highly concentrated—and therefore, is implicitly permitting the heightened volatility that comes with concentration, as speculators may be required to exit their contracts at whatever price the other party demands. The CFTC should amend the position limits for energy futures so that the highest possible HHI score is one in the competitive range—capping a

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<sup>60</sup> Jason Bordoff, “Why This Energy Crisis is Different,” Columbia University Center on Global Energy Policy, September 24, 2021, available at <https://www.energypolicy.columbia.edu/research/op-ed/why-energy-crisis-different>.

<sup>61</sup> International Institute for Sustainable Development, “Boom or Bust: How commodity price volatility impedes poverty reduction, and what to do about it.” (Winnipeg, Canada: 2008), available at [https://www.iisd.org/system/files/publications/boom\\_or\\_bust\\_commodity.pdf](https://www.iisd.org/system/files/publications/boom_or_bust_commodity.pdf).

<sup>62</sup> Gregory Meyer, “CFTC: Regulators aim to curb the ‘massive passives,’” *Financial Times*, November 24, 2009, available at <https://www.ft.com/content/d26be3de-d9d6-11de-ad94-00144feabdc0>.

<sup>63</sup> Commodity Futures Trading Commission, “Position Limits for Derivatives,” *Federal Register* 86 (9) (2021): 3236–3493, available at <https://www.federalregister.gov/documents/2021/01/14/2020-25332/position-limits-for-derivatives>.

<sup>64</sup> U.S. Department of Justice Antitrust Division, “Horizontal Merger Guidelines,” available at <https://www.justice.gov/atr/horizontal-merger-guidelines-08192010> (last accessed January 2022).

trader's individual market share at roughly 15 percent, which would allow six traders to each have 15 percent market share while maintaining a competitive market.

*34. How should the Commission coordinate its efforts with international groups and other regulatory bodies and supervisors? Are there standards, definitions, or metrics that could facilitate the sharing of relevant climate-related information amongst regulatory bodies and supervisors, and/or their analyses and aggregation of climate-related data? Are there specific steps that could be taken to enhance global coordination and regulatory comity?*

The CFTC should join the Network for Greening the Financial System (NGFS), an international organization of financial regulators focused on developing solutions to mitigate climate risk in the financial system. Other U.S. financial regulators, including the Federal Reserve, Federal Deposit Insurance Corporation, and Federal Housing Finance Agency, are already members.<sup>65</sup> Engaging in the NGFS would allow the CFTC to share with and learn best practices from other financial regulators about addressing climate risk in derivatives markets.

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Thank you again for the opportunity to comment on the RFI. We would be pleased to answer any additional questions you may have.

Sincerely,

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<sup>65</sup> NGFS, "Membership," available at <https://www.ngfs.net/en/about-us/membership> (last accessed July 2022).